DOCUMENT RESUME

ED 035 389 JC 690 443

AUTHOR Snyder, Fred A.; Klein, Ruth B.
TITLE Does Financial Aid Help? A Study of the Effectiveness of Financial Assistance to Students at Harrisburg Area Community College.
INSTITUTION Harrisburg Area Community Coll., Pa.
PUB DATE 69
NOTE 18p.

EDRS PRICE EDRS Price MF-$0.25 HC Not Available from EDRS.
DESCRIPTORS *Grants, *Junior Colleges, *Scholarship Loans, *Student Loan Programs
IDENTIFIERS Pennsylvania

ABSTRACT

Certain forms of financial aid were studied to determine the academic and personal background of the recipients and if the aid promoted college attendance, academic achievement, and personal development. The subjects were full-time and received scholarships or grants awarded specifically to low-income students; those with other forms of aid were excluded. The recipient group contained 57 men and 51 women; the control group, 45 men and 40 women. The questions were: do recipients earn better grades? if so, is it because of academic ability? do they have fewer academic suspensions? do they remain enrolled longer? do they have a higher graduation rate? do they earn more credits in two years? The groups were similar in age, marital status, and mother's education; they differed in ACT scores, family income, father's education, and number of dependents in family. Half the recipients said they probably could not and a quarter said they certainly could not have attended college without the aid. They ranked their direct benefits as: more years of college, more time for study, full-time schedule, better grades, less part-time work, time for other activities. They also felt a special obligation from receiving the aid. Recipients made higher grades (also related to ACT scores), had fewer academic suspensions, had a higher graduation rate, earned more credits, and more remained enrolled. A few differences were found between the men and women. [Not available in hard copy due to marginal legibility of original document.] (HH)

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ED035389

DOES FINANCIAL AID HELP? A STUDY OF THE EFFECTIVENESS OF FINANCIAL ASSISTANCE TO STUDENTS AT HARRISBURG AREA COMMUNITY COLLEGE

Fred A. Snyder
Director of Research and Community Resources

Ruth B. Klein
Counselor and Financial Aid Officer

Harrisburg Area Community College
Harrisburg, Pennsylvania
October, 1969

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Amounts of financial assistance available to college students have increased considerably during the past decade. Administrators of student financial aid programs are increasingly challenged by large increases in the student population, rising educational costs, fluctuations in government-supported programs, and questions concerning the purpose and effectiveness of financial aid programs.

A brief review of the literature regarding financial assistance to college students reveals that few, if any, specific claims to effectiveness toward increased attendance, retention, and achievement can be made. A number of studies have dealt with the distribution of financial aids to individuals of varying socio-economic levels. Several authors (Cliff and Ekstrom, 1962; Holland, 1961; Harris and Schenk, 1959; and West, 1963) have noted a tendency for financial aids to be distributed during the 1950's and early 1960's favorably to upper-income students or students who present the best case for themselves by supplying faulty information. Some tendency was noted for upper-class students to receive out-right grants; whereas, less affluent students were likely to receive an offer of only a loan.

Regarding the effectiveness of financial aids, several researchers (West, 1963; and Kimball, 1968) concluded that students who received scholarship aid were merely made more comfortably to afford their educational plans which they would have completed even without financial assistance.

Others found no relationship between family financial status and college attrition (Brown and Callis, 1959; Berdie, 1954; Cliff and Ekstrom, 1962). Iffert (1956) concluded that student attrition is caused by a number of personality factors, such as academic interest, in addition to financial limitation.

There have been some questions raised as to the extent of financial aid necessary for students who attend low-tuition area colleges. However, as Willingham and Findikyan (1969) point out, the low-tuition two-year college frequently serves students on the "social margin of the educational ethos." Consequently, a greater proportion of the educational expenses of students attending two-year colleges may be required from sources outside the family than is the case for students at four-year institutions. The philosophy of the financial aid program at H.A.C.C. has been to provide assistance to low-income students who otherwise could not attend, or to allow them to enroll full-time rather than part-time at the College and to participate in a full college life as well. Thus, it is appropriate to inquire about the effectiveness of the financial aid program in attracting needy or low-income students to the community college, and in promoting their retention, academic achievement, and participation in related activities.

Purpose of the Study

The study is designed to answer two broad questions:

1. What are the academic, personal, and family background characteristics of financial aid recipients at Harrisburg Area Community College?
2. What evidences exist that financial aids have been helpful to recipients in promoting college attendance, educational achievement, and personal development?

Population

The population for this study includes full-time matriculants at H.A.C.C. during 1967, who received one or more of the following types of financial aid during the 1967-68 academic year: scholarships or grants from the College, private sources, Pennsylvania Higher Education Assistance Agency (PHEAA), or Economic Opportunity Grants (EOG); loans from National Defense Education Act (NDEA); employment under the College Work-Study Program (CWSP). These students may or may not have received the included types of financial aid during their second year (1968-69) at the College. Students who received only one or more of the following types of financial aid are not included in the study: Vocational Rehabilitation, PHEAA loans, College short-term loans, veterans benefits, and regular part-time employment. These categories of aid were excluded from the study because they are not awarded exclusively to low-income students, but are available also to students from middle and higher income families

A control sample was selected randomly from among all 1967 full-time matriculants at H.A.C.C. who had not received the

types of financial aid which were determinants for including students in the financial aid recipient group. Because females were over-represented in the aid recipient group, a number of males had to be removed from the original control group. For this study the aid recipient group contained 57 males and 51 females, and the control group contained 45 males and 40 females.

Research Questions

A significant objective of this study was to describe certain characteristics of students in the aid recipient and control groups. Also, data regarding a number of research questions about achievement and retention were examined by using small sample statistics to test hypotheses. The research questions are as follows:

1a. Do financial aid recipients earn better grades than similar students who have not received financial aid?

1b. If such a difference in grades does exist, is it due to academic ability as measured by ACT composite score?

2. Do financial aid recipients experience academic suspension less frequently than students who have not received financial aid?

3. Do financial aid recipients remain enrolled(or receive an associate degree or certificate) to a greater extent than students who have not received financial aid?

4. Do financial aid recipients have a higher rate of graduation than students who have not received financial aid?
5. Do financial aid recipients earn more credits (during the two-year period ending spring 1969) than students who have not received financial aid?

Hypotheses which correspond to each of the above-written research questions were tested. Sexes were investigated separately.

Findings - Description and Research Questions

We now review our findings regarding financial aid recipients and the control group to include considerations of demographic characteristics, financial aid and employment information, reactions to having received financial aid, and patterns of college achievement and retention.

Demographic Description

The financial aid recipients and the control group were found to be similar in terms of their age distribution, marital status, and educational level of their mothers. They were found to differ in terms of educational level of their fathers, number of dependent siblings and other dependent persons living at home, and at ACT composite score (a test of academic ability)..

The median age of both groups of students was nearly 19 (18.9 and 18.7). Financial aid recipients ranged in age from a low of 17 to a high of above 35.

Each of the two groups contained slightly more males than females. The control sample was selected in a way to match the proportions of males and females in the financial aid group (p=.53 for males in each group). Thus, females tended to be over-represented in the financial aid recipient group as compared to the entire College student population, which consisted nearly of two males to one female.

Just under nine-tenths of the financial aid recipients and over nine-tenths of the control sample were single.

The mothers' educational level for both financial aid recipients and the control sample was essentially the same. However, the fathers' level of education was lower for the financial aid recipients than for the control sample (Table 1). One-third of the parents of financial aid recipients, as compared to one-fifth of the parents of the control sample, failed to complete high school.

TABLE 1
FATHERS' EDUCATIONAL LEVEL
FOR FINANCIAL AID RECIPIENTS AND CONTROL STUDENTS

Fathers' Educational Level	FAR N	FAR %	Control N	Control %
Completed 8 yrs. or less	13	15.7	5	7.5
H. S., Attended	15	18.1	9	13.4
H. S., Graduated	39	47.0	37	55.2
Attended College	5	6.0	7	10.4
Received Bachelors degree	8	9.6	7	10.4
Received Higher degree	3	3.6	2	3.1
Total	83	100.0	67	100.0

Financial aid recipients reported a greater number of dependent siblings and other dependent persons living in their homes than did the control group (Table 2). Over one-third of the financial aid recipients, compared to about one-seventh of the control sample, reported three or more dependents in their homes.

TABLE 2
DEPENDENT SIBLINGS AND OTHER DEPENDENTS AT HOME FOR FINANCIAL AID RECIPIENTS AND CONTROL STUDENTS

Number of Siblings	FAR N	FAR %	Control N	Control %
0	13	14.6	22	28.2
1	28	31.5	27	34.6
2	15	16.8	17	21.8
3	18	20.2	7	9.0
4	7	7.9	3	3.8
5	4	4.5	1	1.3
6-up	4	4.5	1	1.3
Total	89	100.0	78	100.0

The mean family income for all financial aid recipients was $5700, compared to a median for all H.A.C.C. students of $7574*. Females had a lower family income than did males--$5137, as compared to $6193. It is interesting to note that the economic backgrounds of female aid recipients are noticeably lower than for males, and that females are proportionally over-represented in the financial aid group. Implications and/or causation of these findings remain to be explored.

*From 1967 ACT Student Profile Report data.

The financial aid recipients had a slight superiority ($p<.05$) in academic ability as measured by the American College Testing Composite score (mean scores of 19.7 and 18.0 for the aid recipient and control groups, respectively).

Financial Aid and Employment

Median amounts for scholarships, loans, and CWSP during students' freshman year were $290, $254, and $358. These amounts were awarded to 67, 46, and 32 students, respectively. These awards are not additive for each recipient, as a given student might have received one or more of the several types of awards. Fewer students were granted awards during their sophomore year than during their freshman year, perhaps as a result of attrition and perhaps due to reduced financial need. Median amounts for scholarships, loans, and CWSP during students' sophomore year were $296, $281, and $401, respectively. These awards were granted to 42, 14, and 10 recipients, respectively.

No difference appeared to exist in the extent of part-time employment between aid recipients and control students when College Work Study Program employment was included as regular part-time employment. Fifty-nine percent of the aid recipients and 70 percent of the control sample worked at part-time employment (not including CWSP) during their freshman year to an extent of 7.0 and 18.3 median hours per week. Within the control group, males and females tended to work the same hours per week, but within the financial aid recipient

group, males tended far more than females to have part-time jobs. The number of students who were employed part-time during their sophomore year dropped off slightly from the freshman year.

Reported Benefits of Financial Aid

One-half of the aid recipients stated that they probably or certainly could not have attended college without aid. Nearly one-fourth of the students indicated that they definitely could not have attended had they not received financial assistance. Females more than males tended to report that their college attendance was dependent upon receiving financial assistance.

Aid recipients reported direct academic benefits from receiving aid. They rated areas of possible benefit in the following rank order, with the percent rating as very important shown:

Area of Benefit	Percent Rating as Very Important
Additional years of college	61
More time for study	49
Carry a full-time schedule	45
Make better grades	43
Reduce part-time job	22
Participate in co-curricular activity	5

Despite the low rating given to participation in co-curricular activities by financial aid recipients, they reported slightly more participation than did control students.

Aid recipients were more receptive than were control students to the idea of accepting student loans and part-time jobs after transferring from the two-year college. The two groups were equally willing to accept scholarship assistance during their last two years of college. Financial aid recipients more than control students also noted a special social and personal obligation from receiving financial aid.

Retention and Achievement

Financial aid recipients earned significantly higher grades than did control students (Table 3). Also, grade achievement was found to be related to students' ACT scores. A numerical, but non-significant, difference between earned grades by males and females was found; females earned higher grades.

TABLE 3
ANALYSIS OF VARIANCE SUMMARY - AID RECIPIENT AND CONTROL GROUPS, SEX, AND ACT SCORE

Source	D.F.	F Ratio	Signifi-cance
Group	1	7.33	$p<.01$
Sex	1	2.51	NS
ACT level	2	3.94	$p<.05$
Group x sex	1	0.38	NS
Group x ACT	2	0.12	NS
Sex x ACT	2	0.16	NS
Group x sex x ACT	2	0.20	NS
Error	152		

Significantly more male aid recipients than male control students remained in good standing (were never academically suspended) through the two-year period (Table 4). No difference was found between females in the two groups.

TABLE 4
ACADEMIC SUSPENSION OF AID RECIPIENTS AND CONTROL STUDENTS

	Number of Students			
	Males		Females	
	FAR	C	FAR	C
Never suspended	55	28	46	33
Suspended	2	14	5	3
	$X^2 = 15.87$, $p < .01$		$X^2 = 0.06$, $p > .05$	

Significantly more male aid recipients than male control students remained enrolled through the two-year period (Table 5). A similar female difference was apparent, but was not statistically significant. Retention for males was better than for females within the aid recipient group.

TABLE 5
CONTINUED ENROLLMENT (OR GRADUATION) OF AID RECIPIENTS AND CONTROL STUDENTS

	Number of Students			
	Males		Females	
	FAR	C	FAR	C
Enrolled (or graduated)	42	21	32	21
Not enrolled	15	24	19	19
	$X^2 = 7.77$, $p < .01$		$X^2 = 0.97$, $p > .05$	

The rate of graduation was higher for male and female aid recipients than for comparative control students (Table 6). The rate of graduation was higher for females than for males within each group.

TABLE 6
RECEIVED DEGREE OR CERTIFICATE
BY AID RECIPIENTS AND CONTROL STUDENTS

	Number of Students			
	Males		Females	
	FAR	C	FAR	C
Rec'd degr. or cert.	20	7	25	11
No degr. or cert.	37	38	26	29
	$X^2 = 4.93$, $p<.05$		$X^2 = 4.34$, $p<.05$	

Male aid recipients earned significantly more credits during the two-year period than did male control students (Table 7). A similar female difference was apparent, but not significant. There were no differences in the number of credits completed between males and females within each group.

TABLE 7
MEDIAN NUMBER OF CREDITS COMPLETED
BY AID RECIPIENTS AND CONTROL STUDENTS

Males		Females	
FAR	C	FAR	C
54.5	37.5	53.0	40.0

Using the Mann-Whitney U Test for differences between badly-skewed samples, and correcting to use a Z test, we get:

$Z_{\text{males}} = 3.03$, $p<.01$ $N_1 = 57$, $N_2 = 42$

$Z_{\text{females}} = 1.28$, $p>.05$ $N_1 = 57$, $N_2 = 36$

Summary and Conclusions

Generally, greater differences were found between the male students of the two groups than were found between female students of the two groups. This suggests the possibility that receiving financial aid had a greater effect on the male students than it did on the female students.

Some differences between financial aid recipients and control students were found regarding student characteristics and retention and achievement patterns. However, our findings did not show a cause and effect relationship. The evidence did show, however, that our financial aid recipients were more deserving in terms of socio-economic criteria (family income and dependent siblings), that they were

academically more persistent, and that they did achieve at a higher grade level.

Our study did not provide clear evidence that financial assistance promoted college attendance among low-income persons, but the proposition is still supportable.

Our study was limited to the "low-income" segment of financial aid recipients, and did not allow an investigation of more affluent students who received only funds which are open to students of middle and upper-middle income backgrounds, such as veterans' benefits and PHEAA loans. A more comprehensive study might attempt to compare academic retention and achievement of low-income and middle-income aid recipients, to examine more comprehensively the effects of financial aids to students of varying levels of financial need. Such a study may help us to learn more effectively how to allocate the limited resources available for financial aids, so as to promote those patterns of college attendance consistent with our educational purposes and social philosophies.

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